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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,724	08/10/2001	Keith Louis Houghton	13744	4814
293	7590	02/24/2004		
DOWELL & DOWELL PC SUITE 309 1215 JEFFERSON DAVIS HIGHWAY ARLINGTON, VA 22202			EXAMINER CHOI, STEPHEN	
			ART UNIT 3724	PAPER NUMBER 14

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,724

Applicant(s)

HAUGHTON ET AL.

Examiner

Stephen Choi

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-13 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Figure A.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05 February 2004 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the curved plane having a radius of curvature that decreases as the distance from the leading edge increases set forth in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1, 3-13, and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the specification for the claimed curved plane having a radius of curvature that decreases as the distance from the leading edge increases set forth in claim 1. The specification describes the elected embodiment of Figure 14 as being similar to the embodiments shown in Figures 12 and 13 which show a modified hemispherical dimple. The term "hemispherical" is indicative of a dimple having a constant radius of curvature.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3-13, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what structure is set forth by "a curved plane having a radius of curvature that decreases as the distance from the leading edge increases".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



8. Claims 1, 3-13, and 17, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Standal (US 2,972,364).

Standal discloses all the elements of the invention including:

- a) a generally circular blade portion (col. 1, line 24);
- b) a plurality of spaced apart teeth having a leading plane and a dimple wherein the dimple having a dimple leading edge, a dimple leading edge plane, a top upwardly curved portion and a surface that is shaped inwardly from the top curved portion forming a curved plane and a top cutting angle wherein a positive rake defined by the top cutting angle formed by the dimple (see attached Figure A);
- c) a curved cutting edge (20).

Regarding claim 3, see Figure 1 wherein the leading plane is inclined forwardly. Regarding claims 4-5 and 10-11, see the attached Figure A wherein the positive rake is about 33 degrees. Regarding claims 6-7 and 12, see the attached Figure A wherein a relief angle is about 12 degrees. Regarding claims 8-9 and 13, a lateral clearance angle being between about 1.5 and about 5 degrees (col. 2, lines 69-70).

Response to Arguments

9. Applicant's arguments filed 05 February 2004 have been fully considered but they are not persuasive.

Applicants contend that dimples in the Standal patent do not have a dimple with "a dimple leading edge, a dimple leading edge plane, a top upwardly curved portion and a surface that is shaped inwardly from the top curved portion and a surface that is

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shaped inwardly from the top curved portion forming a curved plane having a radius curvature that decreases as the distance from the leading edge increases and the tooth having a positive rake defined by the dimple" as claimed in amended claim 1.


The examiner respectfully disagrees. As shown on the attached Figure A, the dimple in the Standal patent does show the dimple having a dimple leading edge, a dimple leading edge plane, a top upwardly curved portion, and a surface that is shaped inwardly from the top curved portion forming a curved plane. Furthermore, the attached Figure A also shows a positive rake provided by a top cutting angle of the dimple. As to the limitation the curved plane "having a radius curvature that decreases as the distance from the leading edge increases", see the rejections in paragraphs 2-5 above. As set forth above, the disclosure does not support such limitation and the examiner is unable to determine what structure is encompassed by that limitation.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Choi whose telephone number is 703-306-4523. The examiner can normally be reached on Monday thru Friday between 9am and 5pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 703-308-1082.

In lieu of mailing, it is encouraged that all formal responses be faxed to 703-872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is 703-308-1148.

sc
February 20, 2004


STEPHEN CHOI
PRIMARY EXAMINER

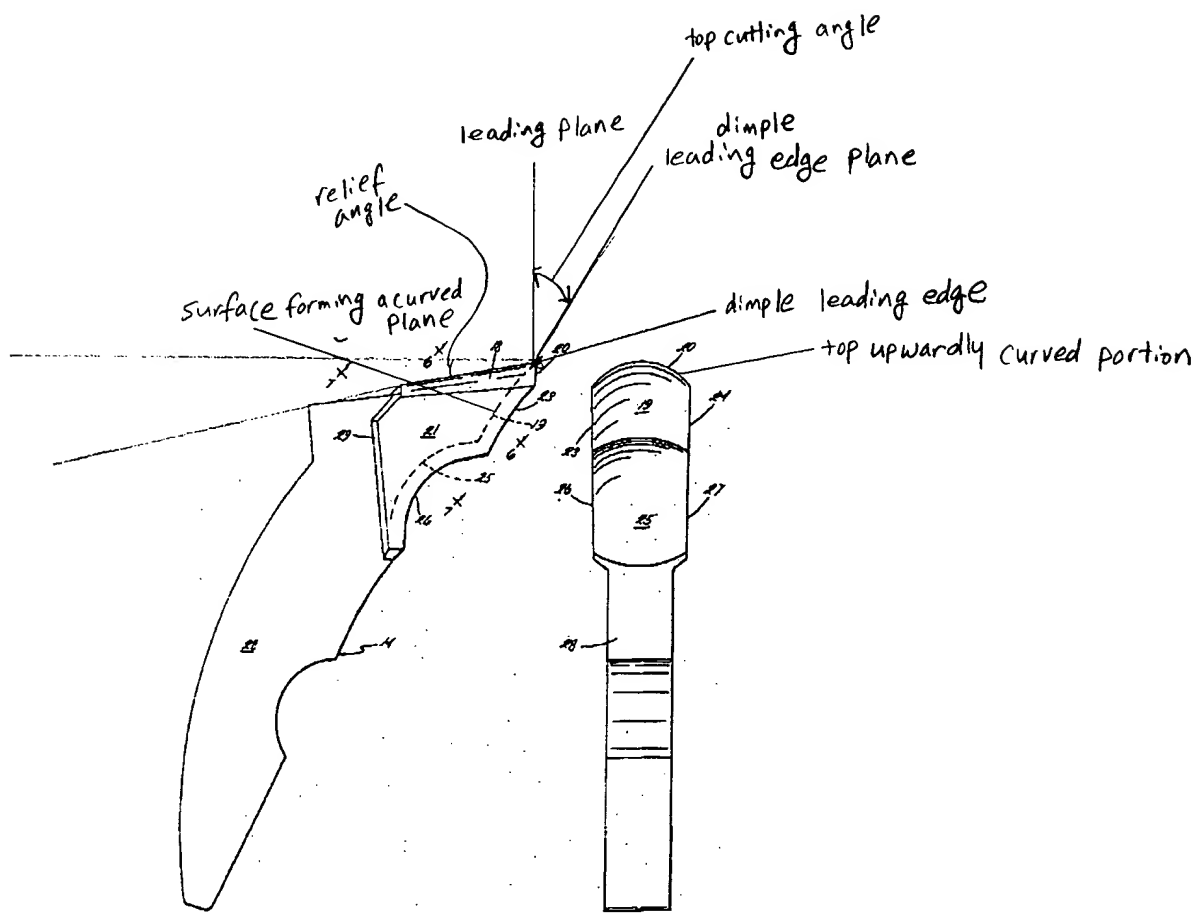


FIG. 1